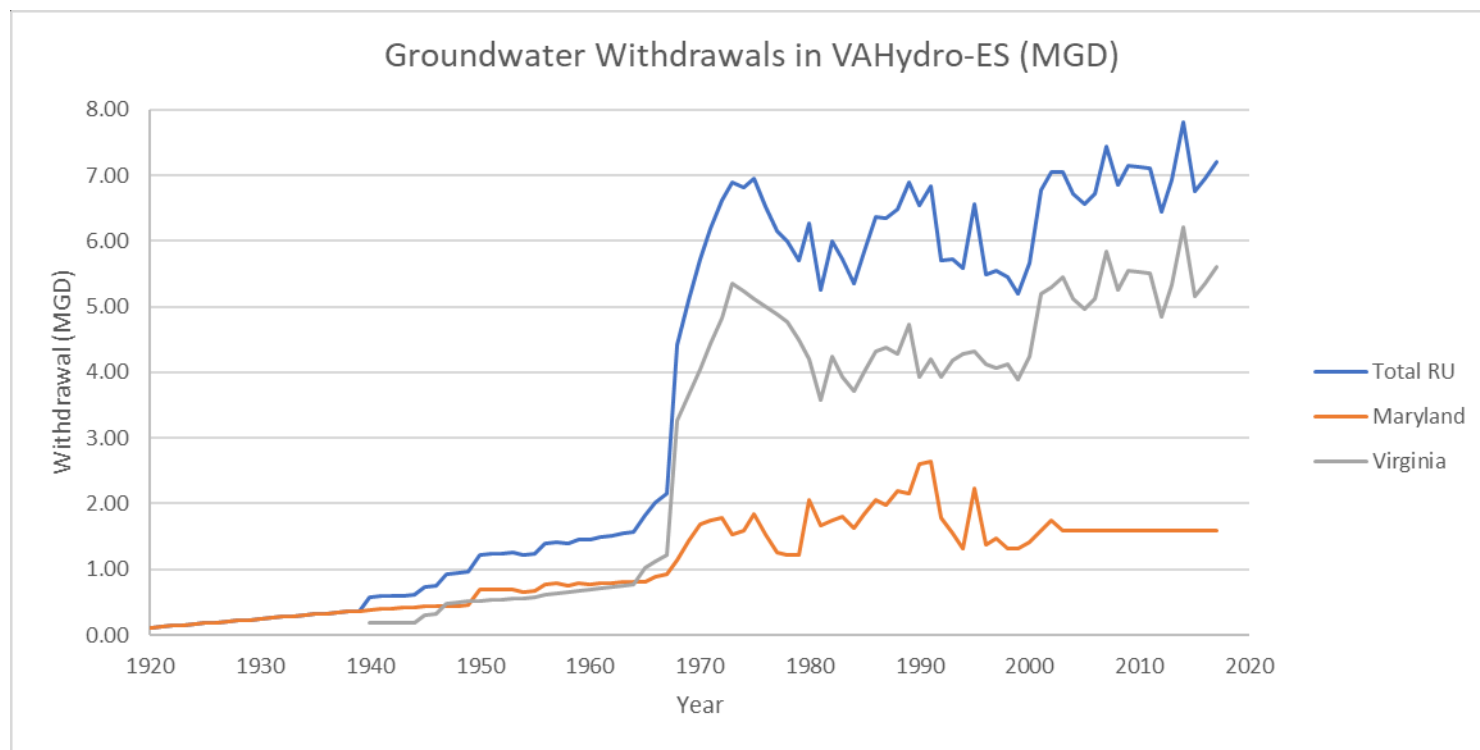
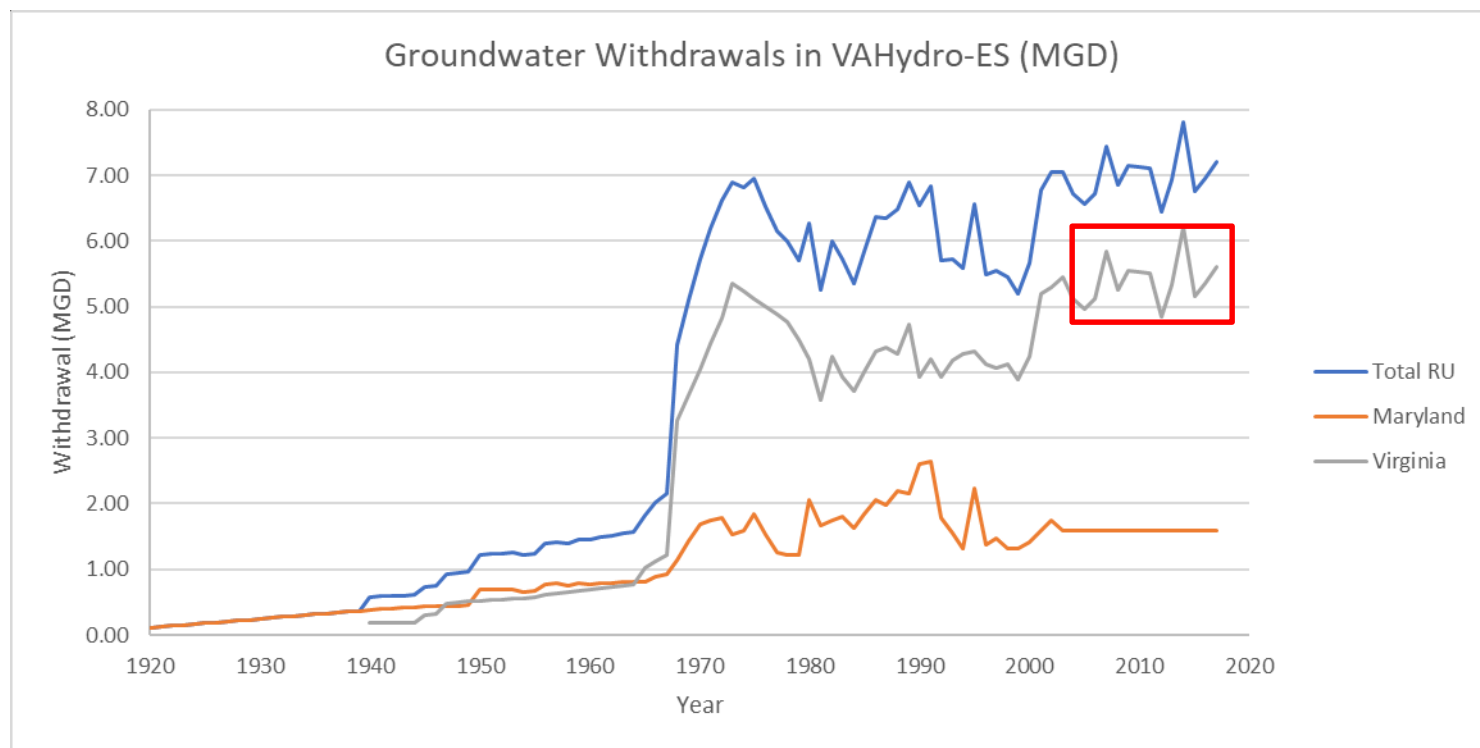


# **VAHYDRO-ES: 2017-2018 ANNUAL SIMULATION OF REPORTED AND TOTAL PERMITTED USE**



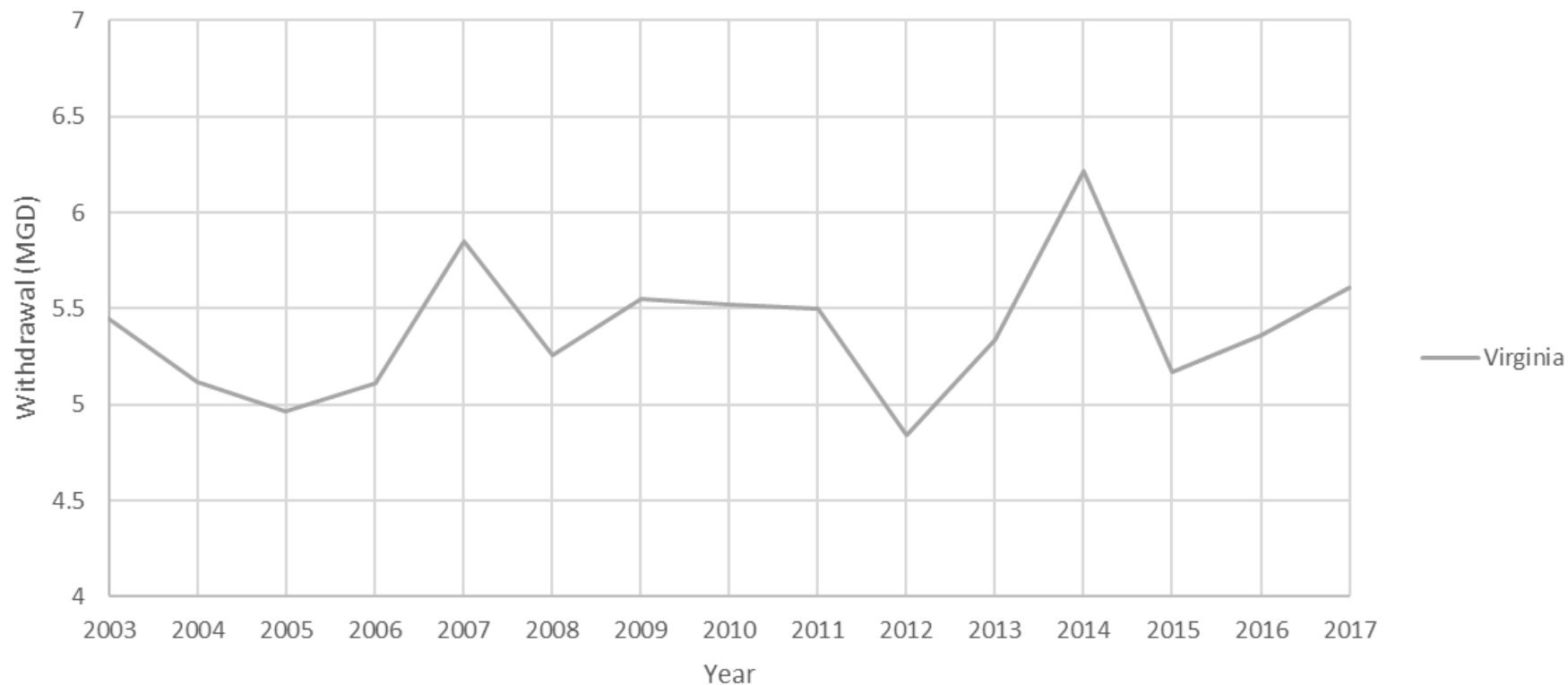


County	2015 Reported Use (MGD)	2016 Reported Use (MGD)	2017 Reported Use (MGD)
Accomack	4.07	4.44	4.76
Northampton	1.1	0.92	0.96
Maryland	1.6	1.6	1.6
<b>TOTAL:</b>	<b>6.77</b>	<b>6.96</b>	<b>7.32</b>

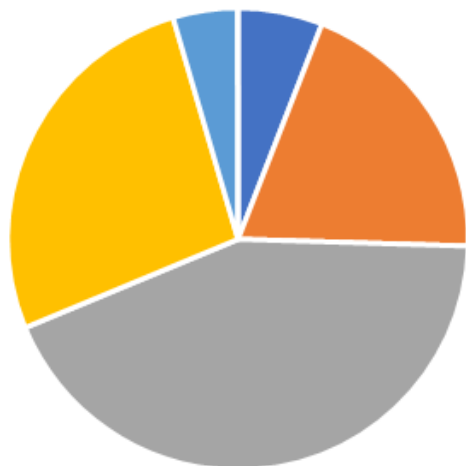


County	2015 Reported Use (MGD)	2016 Reported Use (MGD)	2017 Reported Use (MGD)
Accomack	4.07	4.44	4.76
Northampton	1.1	0.92	0.96
Maryland	1.6	1.6	1.6
<b>TOTAL:</b>	<b>6.77</b>	<b>6.96</b>	<b>7.32</b>

Groundwater Withdrawals in VAHydro-ES (MGD)



Aquifer	2015 Reported Use (MGD)	2016 Reported Use (MGD)	2017 Reported Use (MGD)
Surficial	0.28	0.38	0.34
Upper Yorktown-Eastover	1.14	0.83	1.12
Middle Yorktown-Eastover	2.15	2.53	2.48
Lower Yorktown-Eastover	1.4	1.42	1.53
Exmore Paleochannel	0.2	0.2	0.26
Eastville Paleochannel	0.001	0.001	0.001
<b>TOTAL:</b>	<b>5.17</b>	<b>5.36</b>	<b>5.72</b>

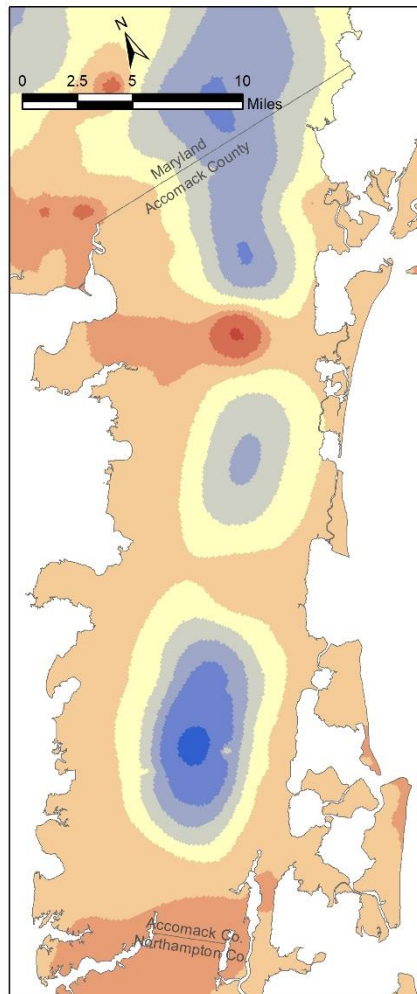


- Surficial - 5.9%
- Upper Yorktown-Eastover - 19.6%
- Middle Yorktown-Eastover - 43.4%
- Lower Yorktown-Eastover - 26.7%
- Exmore Paleochannel - 4.5%
- Eastville Paleochannel - 0.02%

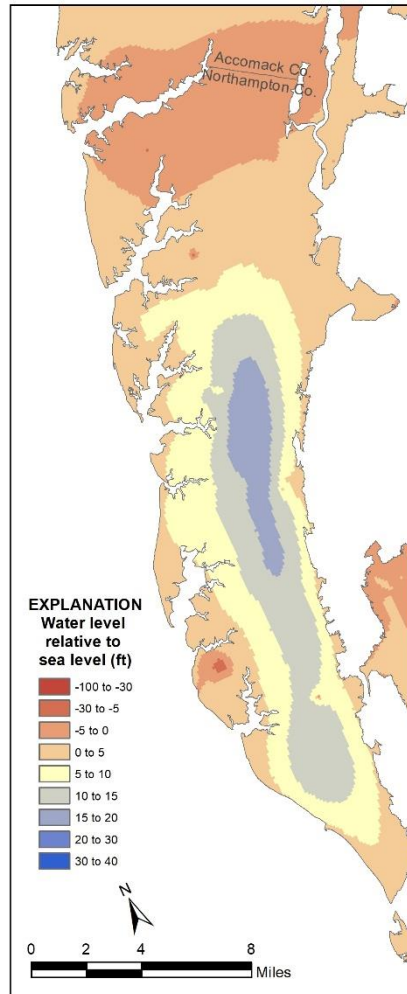




**VAHydro-ES 2017 Reported Use Simulation  
Upper Yorktown-Eastover Water Levels**

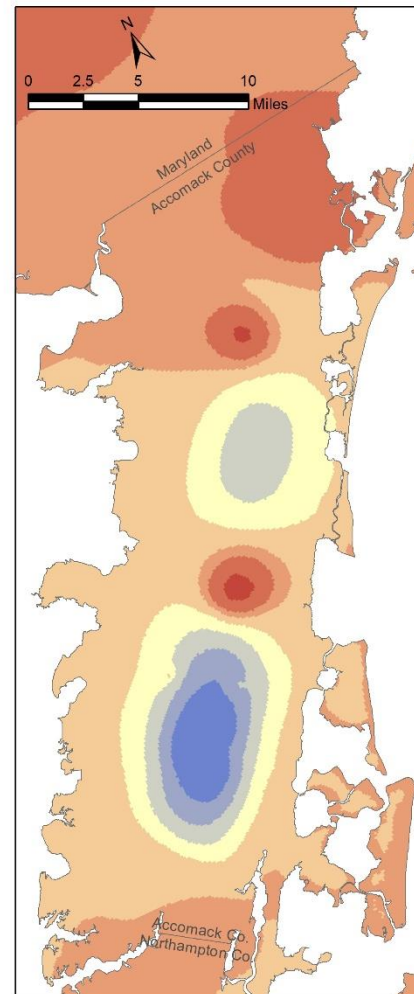


Accomack County

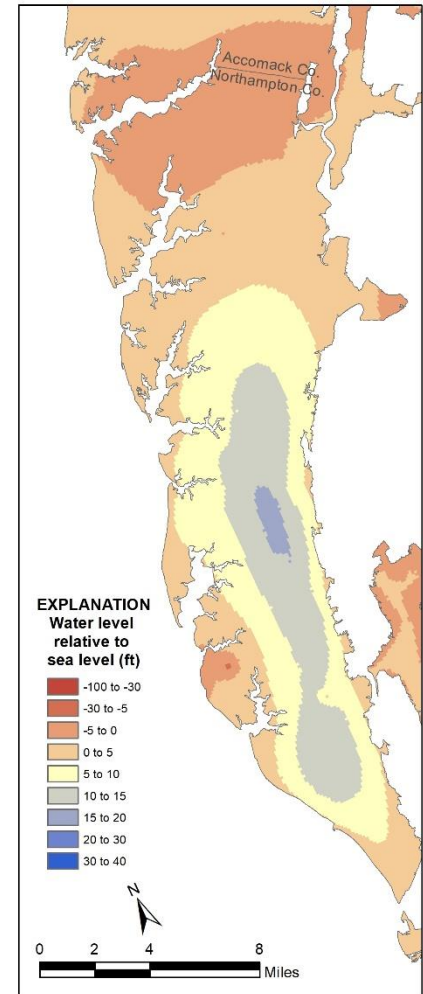


Northampton County

**VAHydro-ES 2017 Reported Use Simulation  
Middle Yorktown-Eastover Water Levels**

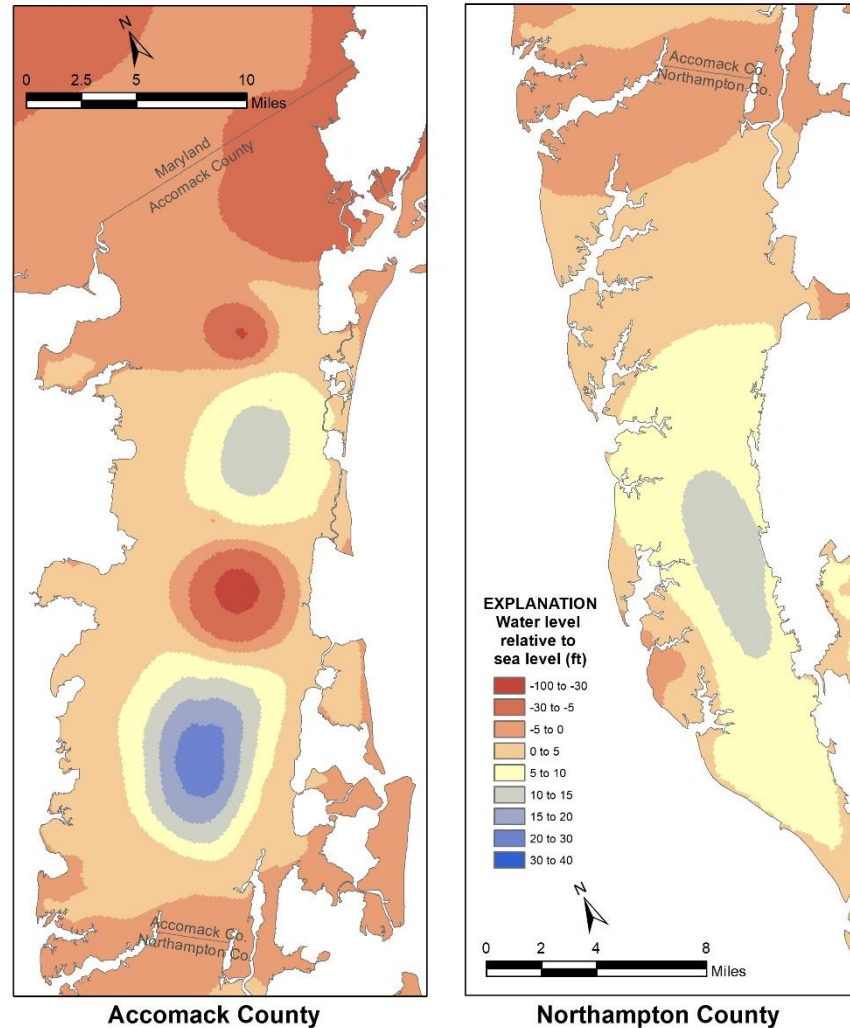


Accomack County



Northampton County

## VAHydro-ES 2017 Reported Use Simulation Lower Yorktown-Eastover Water Levels



Aquifer	2017 Total Permitted (MGD)	2018 Total Permitted (MGD)
Surficial	1.09	1.05
Upper Yorktown-Eastover	3.06	2.96
Middle Yorktown-Eastover	3.25	3.52
Lower Yorktown-Eastover	1.42	1.54
Exmore Paleochannel	0.24	0.70
Eastville Paleochannel	0.07	0.07
<b>TOTAL:</b>	<b>9.13</b>	<b>9.8</b>



- Surficial - 10.7%
- Upper Yorktown-Eastover - 30.1%
- Middle Yorktown-Eastover - 35.8%
- Lower Yorktown-Eastover - 15.6%
- Exmore Paleochannel - 7.1%
- Eastville Paleochannel - 0.7%

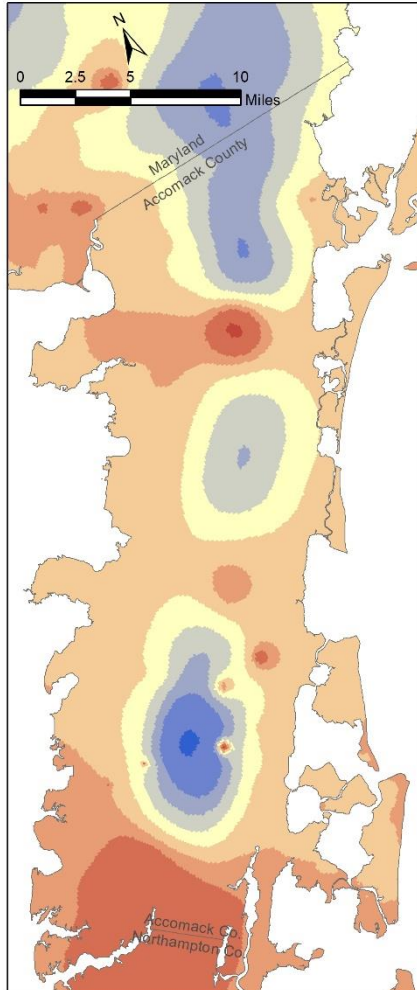




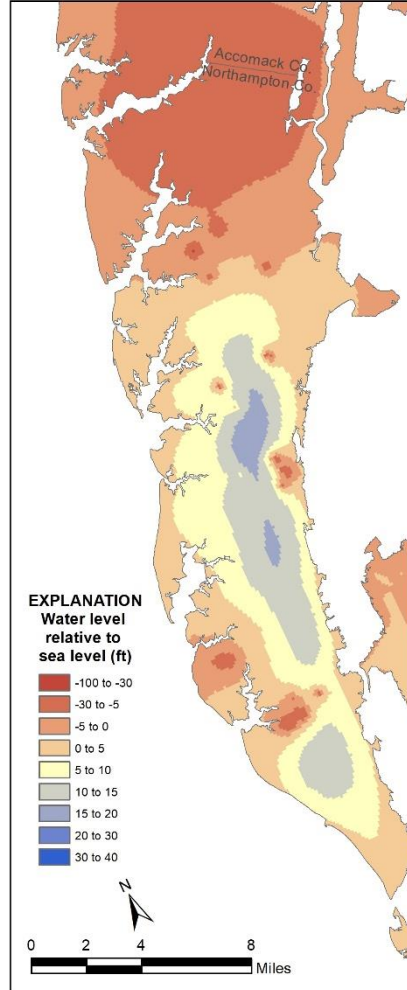
County	2017 Reported Use (MGD)	2018 Total Permitted (MGD)	RU/TP
Accomack	4.76	6.99	68.1%
Northampton	0.96	2.81	34.2%
<b>TOTAL:</b>	<b>7.32</b>	<b>9.8</b>	<b>74.7%</b>



**VAHydro-ES 2018 Total Permitted Simulation  
Upper Yorktown-Eastover Water Levels**

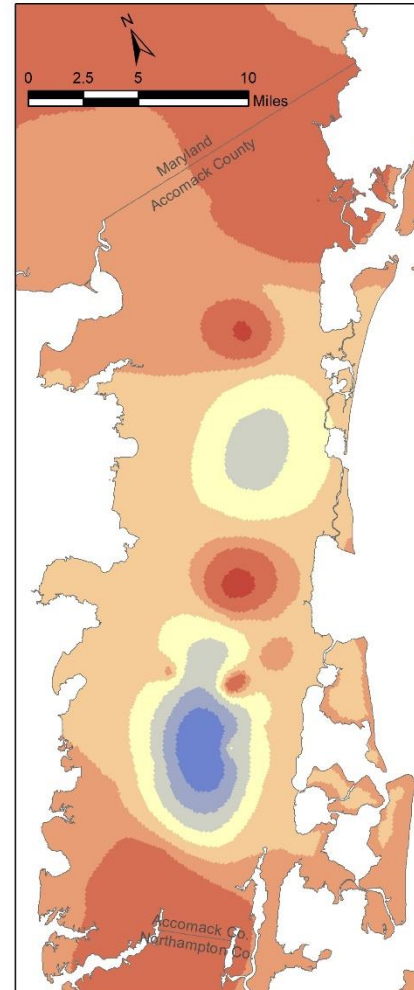


Accomack County

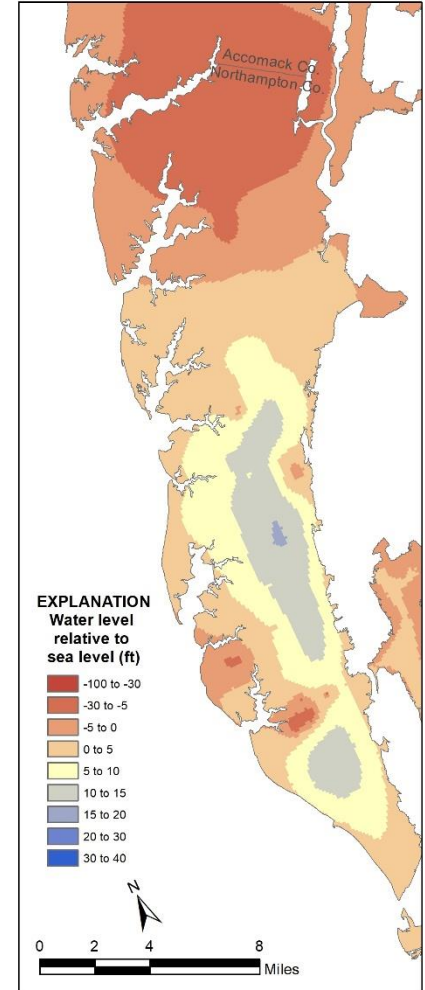


Northampton County

**VAHydro-ES 2018 Total Permitted Simulation  
Middle Yorktown-Eastover Water Levels**

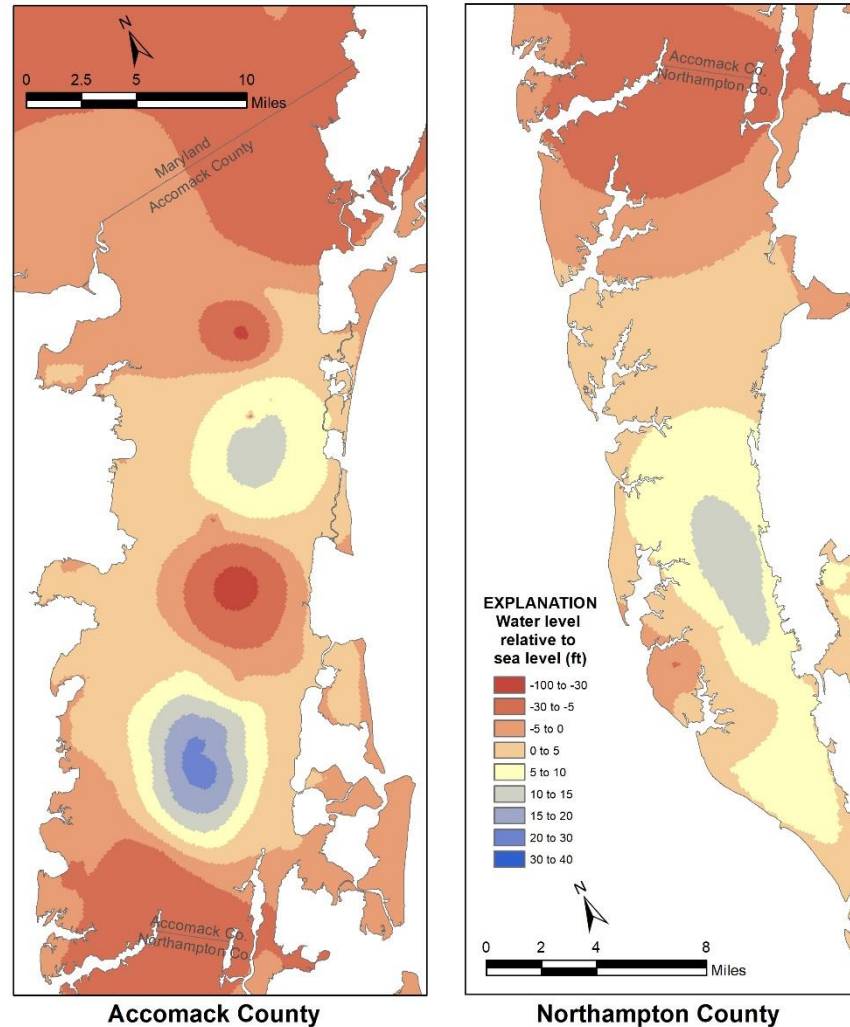


Accomack County



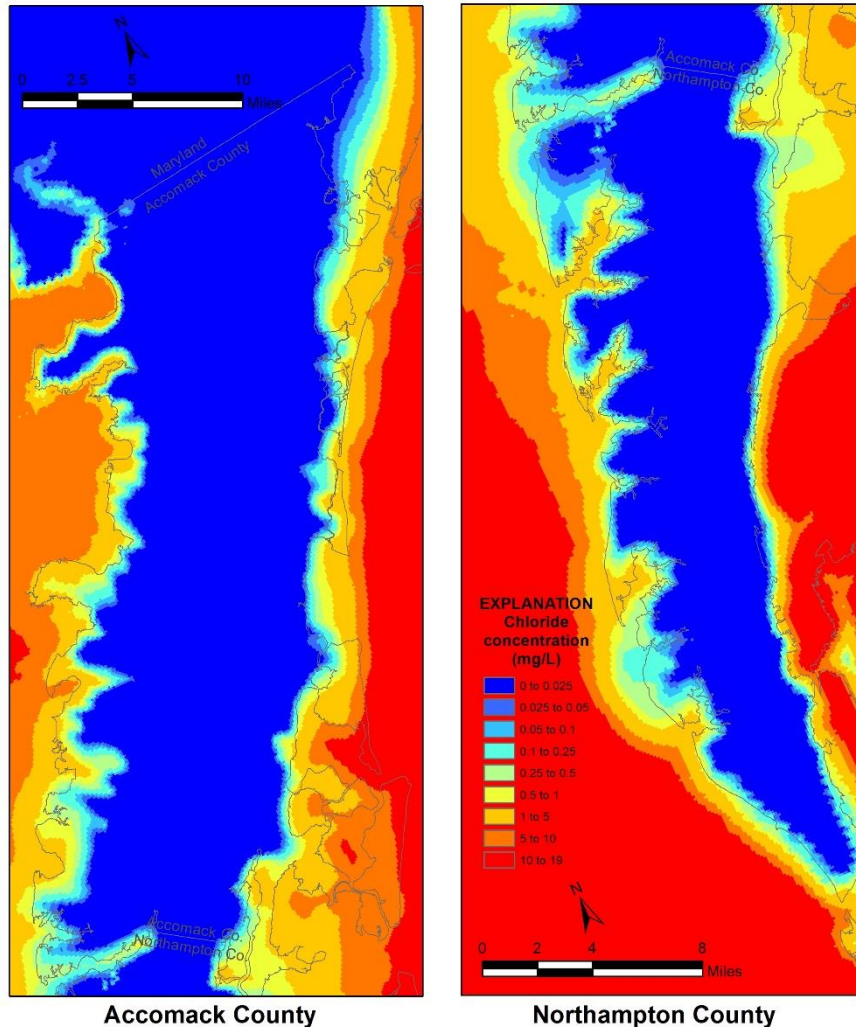
Northampton County

## VAHydro-ES 2018 Total Permitted Simulation Lower Yorktown-Eastover Water Levels

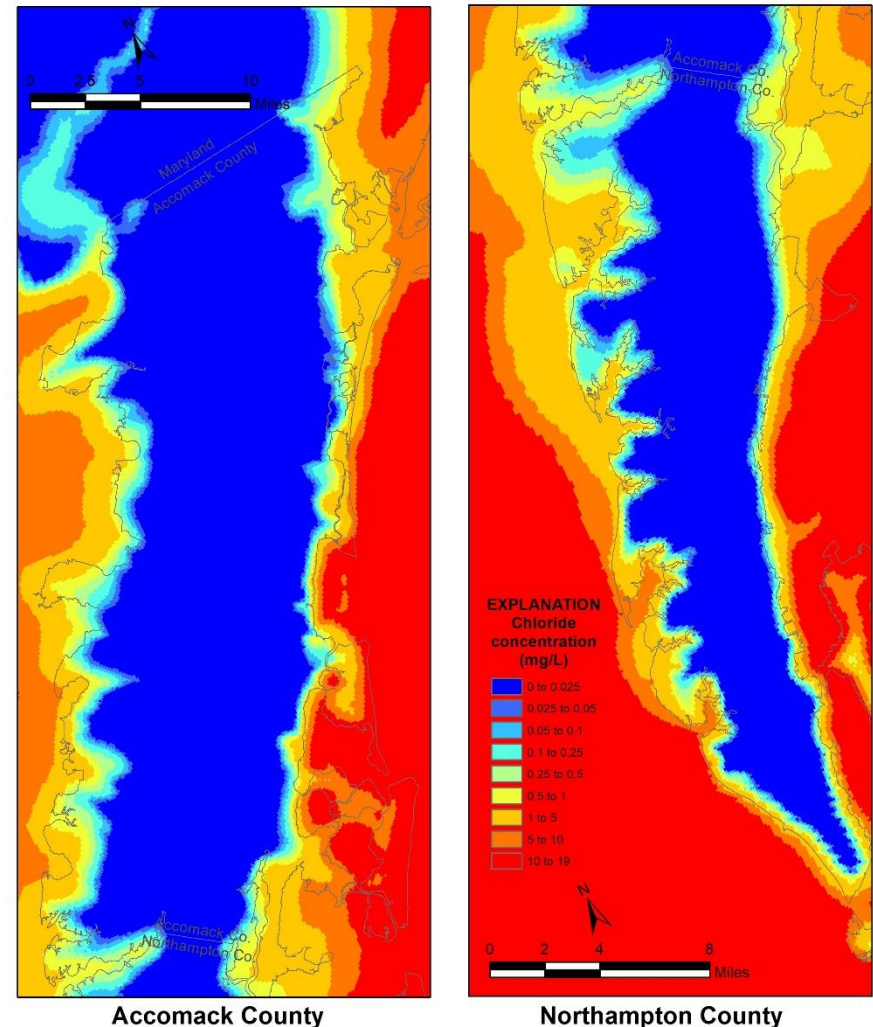




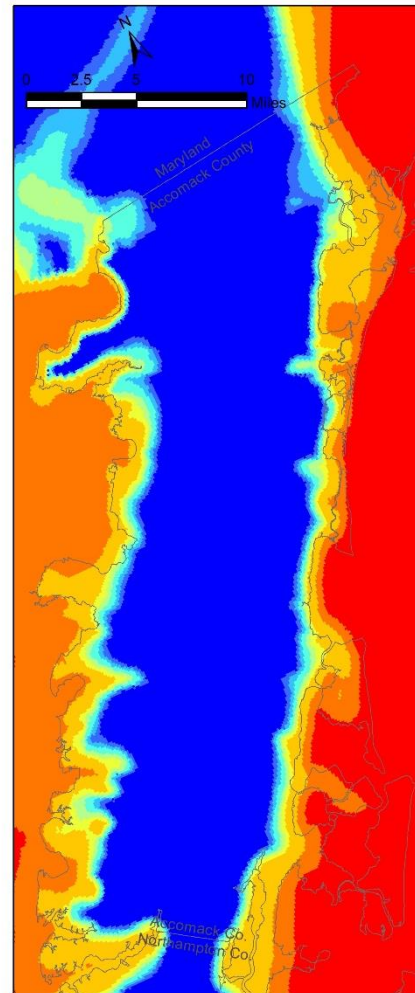
**VAHydro-ES 2018 Total Permitted Simulation  
Upper Yorktown-Eastover Chloride Concentrations**



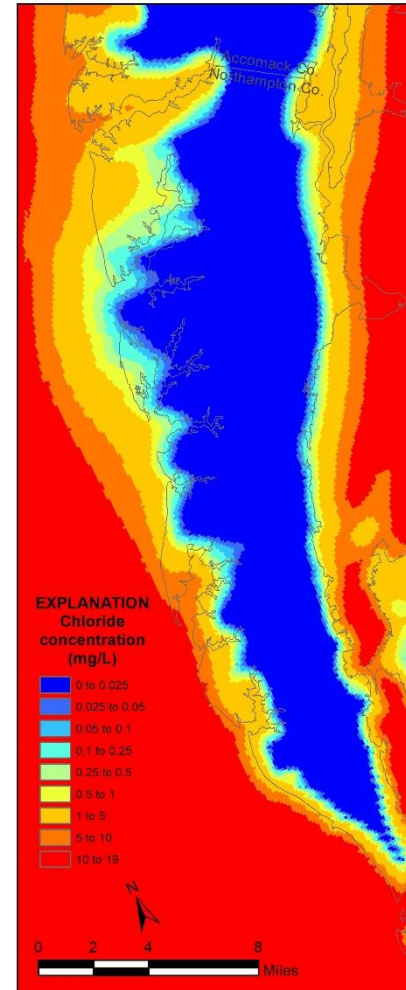
**VAHydro-ES 2018 Total Permitted Simulation  
Middle Yorktown-Eastover Chloride Concentrations**



## VAHydro-ES 2018 Total Permitted Simulation Lower Yorktown-Eastover Chloride Concentrations

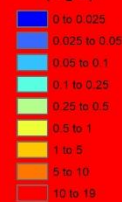


Accomack County



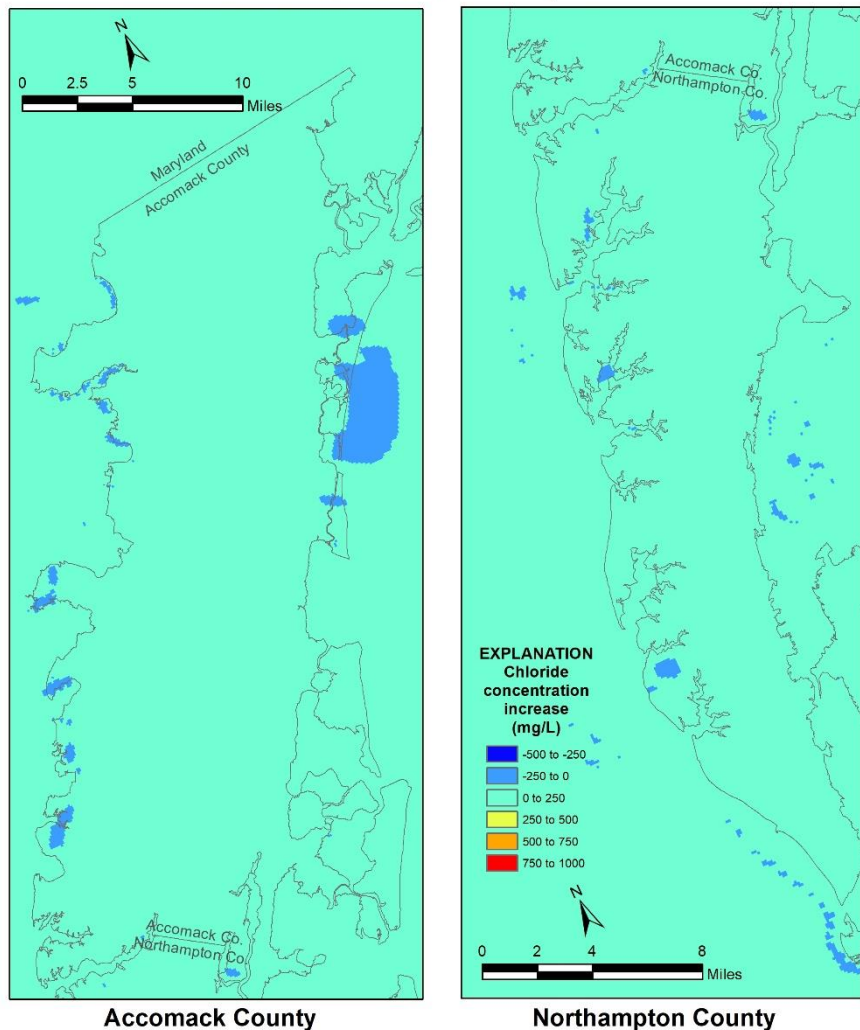
Northampton County

EXPLANATION  
Chloride  
concentration  
(mg/L)

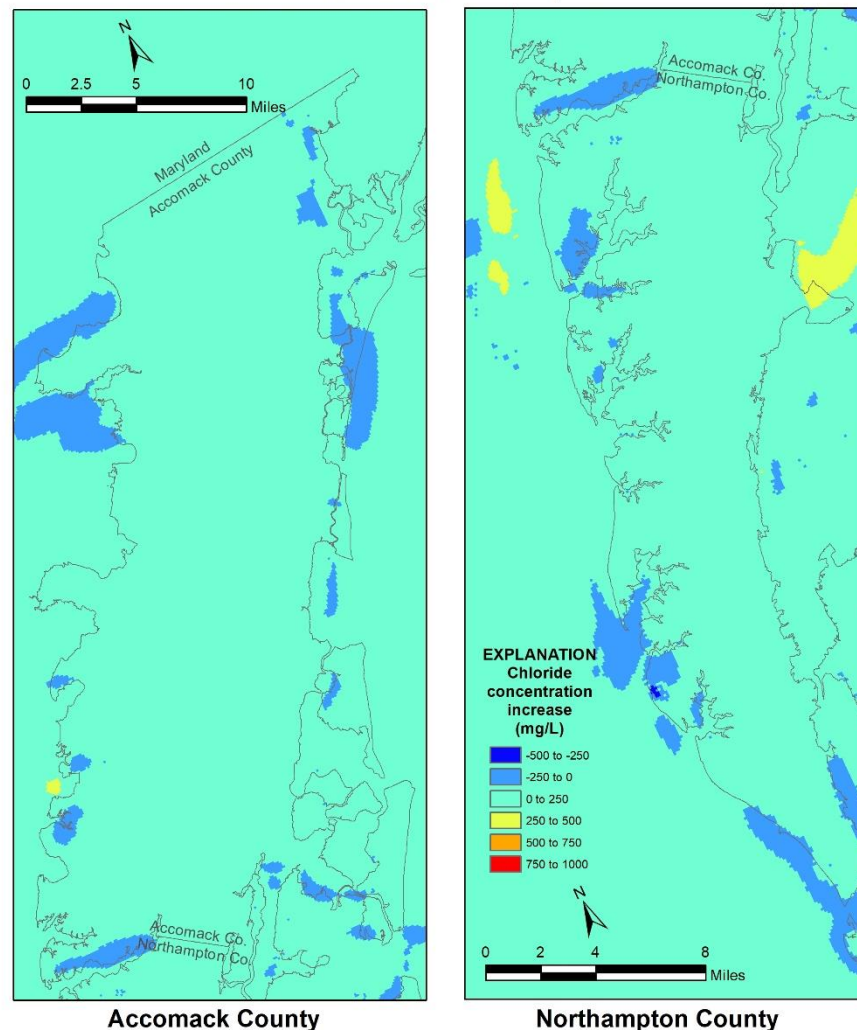




## VAHydro-ES 2017 Upper Yorktown-Eastover Aquifer Chloride Concentrations Increase - Total Permitted versus Reported Use



## VAHydro-ES 2017 Middle Yorktown-Eastover Aquifer Chloride Concentrations Increase - Total Permitted versus Reported Use



## VAHydro-ES 2017 Lower Yorktown-Eastover Aquifer Chloride Concentrations Increase - Total Permitted versus Reported Use

